THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte MICHEL RIBES
and CHRISTIAN BELOUET

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Appeal No. 94-2527
Application 07/816,715[1]

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HEARD: November 13, 1997

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Before GARRIS, PAK, and WALTZ, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

[1] Application for patent filed January 3, 1992.

This is a decision on an appeal from the refusal of the examiner to allow claims 11 through 13[2] and 16 as amended subsequent to the final rejection. These are all of the claims remaining in the application.

The subject matter on appeal relates to a superconducting oxide-based composite material produced by a process comprising the steps of (1) preparing a powdered mixture of a glass having a vitreous transition temperature T_g of less than 750EK and of certain superconducting oxide crystallites, (2) uniaxially compressing the powdered mixture at a temperature of between T_g and T_x, wherein T_x is the glass-crystallization temperature, to thereby produce orientation of the superconducting oxide crystallites, and (3) subjecting the resulting composite material to an additional stretching or rolling operation at a temperature between T_g and T_x to thereby provide shaping of the composite material. This appealed subject matter is adequately illustrated by independent claim 11 which reads as follows:

11. A superconducting oxide-based composite material produced by a process comprising the steps of:

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[2] We observe that appealed claim 13 contains a minor informality which is deserving of correction. Specifically, the second-recited formula for the superconducting oxides contains incorrect subscripts for the calcium and copper substituents. This incorrect formula arose due to the inadvertent presentation of an inaccurately copied claim 13 in Amendment B filed October 6, 1993 (i.e, Paper No. 10). The correct formula is shown in the claim 13 “reproduction” which appears in the appendix of the appellants’ Brief.

preparing a powdered mixture of a glass having a vitreous transition temperature T_g of less than 750EK and of superconducting oxide crystallites selected from the group consisting of $YBa_2Cu_3O_7$ compounds, compounds containing $Tl_2Ba_2Cu_3O_{10}$, compounds containing $Bi_2Sr_2CaCu_2O_8$ and $Bi_2Sr_2Ca_2Cu_3O_{10}$, the percentage of the glass volume being in the range of 2% to 40%;

uniaxially compressing said powdered mixture at a temperature of between T_g and T_x, wherein T_x is the glass-crystallization temperature, said compression producing orientation of said superconducting oxide crystallites;

and furthermore subjecting the resulting composite material to an additional stretching or rolling operation at a temperature between T_g and T_x, to thereby provide shaping of the composite material.

The following references are relied upon by the examiner as evidence of obviousness:

Omori et al. (Omori)
(Japanese '764) JP63-310,764 Dec. 19, 1988

JP01-103,934 (Japanese '934), Patent Abstract, vol. 13, no. 326 (July 24, 1989)

JP01-219,058 (Japanese '058), Patent Abstract, vol. 13, no. 326, (Sep. 1, 1989)

Yoshitake et al. (Yoshitake), "Preparation of Thin Films by Coevaporation and Phase Identification in Bi-Sr-Ca-Cu-O System," Jpn. J. Appl. Phys., vol. 27, no. 6, pp. L1089-91 (June 1988)

Masuda et al. (Masuda), "Glass-Former-Doped Superconductors," Jpn. J. Appl. Phys. Lett., vol. 27, no. 8, pp. L1417-19 (Aug. 1988)

Qui et al. (Qui), "Some Properties of Bulk Y-Ba-Cu-O Compounds Containing SiO_2," J. Appl. Phys., vol. 64, no. 4, pp. 2234-36 (Aug. 15, 1988)

Claims 11 and 12 are rejected under 35 U.S.C. § 103 as being obvious over Qui or Masuda in view of Japanese '764 and Japanese '058.

Claims 13 and 16 are rejected under 35 U.S.C. § 103 as being obvious over the above noted references and further in view of Yoshitake and Japanese '934.

We refer to the several Briefs and to the several Answers filed in the 1993 through 1994 time frame for a complete exposition of the opposing viewpoints expressed by the appellants and the examiner concerning the above noted rejections.[3]

For the reasons which follow, we will not sustain these rejections.

The examiner acknowledges that "Qui et al or Masuda et al do not disclose: (1) uniaxially compressing the powder mixture at a temperature of between Tg and Tx" but argues that, "when desiring to form an oriented superconductor oxide composite, it would have been obvious to one of ordinary skill in the art to substitute the cold-pressing in Qui et al's or Matsuda et al's process by hot-pressing as suggested by JP63-310,764" (Answer, page 4; emphasis in original). We cannot agree.

While we appreciate that Japanese '764 teaches hot-pressing superconductor material or a precursor thereof in order to form an oriented superconductor, we find no disclosure (and the examiner points to none) in this reference concerning the uniaxial

[3] On December 17, 1997, the appellants filed Paper No. 24 entitled "SUBMISSION OF COMMENTS RE TRANSLATION OF JP '764 REFERENCE." Consistent with Board policy, we have not considered this paper since it has not yet been considered by the examiner. Moreover, our disposition of the subject appeal is such that we need not remand the application to the examiner for his consideration of the aforementioned paper.

compression of a superconductor material in admixture with glass much less concerning the uniaxial compression of such a mixture at a temperature between the transition temperature T_g and the crystallization temperature T_x of the glass as recited in the appellants' independent claim 11. In the record before us, the only disclosure of uniaxially compressing a mixture of glass and superconductor material at an elevated temperature and particularly at a temperature of between T_g and T_x is found in the appellants' own specification rather than the applied prior art. Under these circumstances, it is our opinion that the examiner's abovequoted conclusion of obviousness stems from his unwitting application of impermissible hindsight derived from the inventors' own work rather than some teaching, suggestion, or incentive derived from the prior art. W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

As seemingly recognized by the examiner, the appealed claims are product-by-process claims, the patentability of which is based upon the product itself rather than the process by which it is made. In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). Nevertheless, we disagree with the examiner's belief that he has shifted to the appellants the burden of proving that their claimed product is patentably distinct from the prior art. In the absence of a teaching in the prior art to uniaxially compress a powdered mixture of glass and superconductor material at a temperature

within or at least close to the here claimed range, the examiner has no reasonable basis for believing that the prior art includes or would have suggested products which necessarily or inherently possess the characteristics of the appellants' claimed product. This is because, in the absence of such a prior art teaching, it cannot be assumed that the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes. Compare In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

In summary, because of the above discussed deficiencies of Japanese '764 and because these deficiencies are not supplied by any of the other applied references, we cannot sustain the examiner's § 103 rejection of claims 11 and 12 as being

unpatentable over Qui or Masuda in view of Japanese ‘764 and Japanese ‘058 or his § 103 rejection of claims 13 and 16 as being unpatentable over these references and further in view of Yoshitake and Japanese ‘934.

The decision of the examiner is reversed.

REVERSED

Bradley R. Garris Administrative Patent Judge	)	
Chung K. Pak Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Thomas A. Waltz Administrative Patent Judge	)	

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